

Public Service Commission of Wisconsin
Direct Testimony of Randel A. Pilo
Division of Regional Energy Markets

Wisconsin Energy Corporation
Docket 9400-YO-100

January 14, 2015

1 Q. Please state your name, business address, and occupation.

2 A. My name is Randel Pilo. I work at the Public Service Commission of Wisconsin
3 (Commission), 610 N. Whitney Way, Madison, Wisconsin 53705, and am presently the
4 Assistant Administrator in the Division of Regional Energy Markets.

5 Q. Please list your professional work history.

6 A. From 1984 to 1991, I was the Lead Economist at the Wisconsin Department of
7 Development, essentially the state's commerce agency. From 1991 to 2002, I was the
8 Chief Economist in the Commission's Electric and successor Gas and Energy Divisions.
9 From 2003 to the present, I have been an Assistant Administrator in the Gas and Energy
10 Division and recently in the Division of Regional Energy Markets.

11 Q. Please list your educational background.

12 A. In 1980, I graduated from the University of Wisconsin-Milwaukee with a BA in
13 Economics major and Phi Beta Kappa and Dean's Honors distinctions. In 1982, I
14 received my MA in Economics from the University of Pennsylvania with my thesis
15 written for 1980 Nobel Laureate Lawrence Klein. In 1983, I completed all requirements
16 for the PhD at the University of Pennsylvania except thesis.

17 Q. What is the purpose of your testimony?

18 A. My direct testimony covers the topics of wholesale and retail horizontal and vertical
19 market power from an economics perspective, with 20 years of knowledge and

1 experience of regulatory developments affecting merger activity in the pre- and post-
2 regional transmission organization (RTO) time frames. For Wisconsin, the relevant RTO
3 is the Midcontinent Independent System Operator, Inc. (MISO).

4 Q. Do you have a brief summary of your direct testimony?

5 A. Yes. From the vantage point of my discussed subject area alone, the merger could be
6 approved, and the Commission may want to consider some ownership and control
7 options with respect to American Transmission Company LLC and ATC Management
8 Inc. (ATCLLC and ATCMI, together ATC).

9 Q. What experience do you have examining merger cases?

10 A. Back in the mid and late 1990s, I was a Commission staff witness covering market power
11 issues in three merger dockets: Primergy (the abandoned merger of Northern States Power
12 Company (NSP) with Wisconsin Energy Corporation (WEC)), Alliant Energy ((Alliant)
13 Wisconsin Power and Light Company and two Iowa utilities), and WEC-WICOR.

14 Q. Please describe horizontal market power and the issues you see as important in the current
15 application of WEC and Integrys Energy Group, Inc. (Integrys Energy) to merge holding
16 companies to form WEC Energy Group, Inc. (WEC Energy), while keeping the two public
17 regulated utilities, Wisconsin Electric Power Company (WEPCO) and Wisconsin Public
18 Service Corporation (WPSC), as separate operating entities in the MISO marketplace.

19 A. Horizontal market power refers to the ability of the applicant's utility generating
20 companies through generator offer behavior to increase market clearing prices above
21 what would occur under competitive circumstances. In this merger application, the key
22 question is whether the new company will be able to influence market clearing prices in
23 the relevant electricity energy or capacity market.

1 Q. Do you believe the merged company will be able to raise electricity market prices above
2 competitive norms?

3 A. The answer to this question requires understanding what the relevant geographic market is.
4 WEC and Integrys Energy, the applicant in the related Federal Energy Regulatory
5 Commission (FERC) proceeding, have indicated that they believe the relevant market is the
6 complete MISO marketplace covering 16 states. In that situation, it is unlikely the new
7 merged company could influence competitive prices by exercising horizontal market
8 power. I state this for two reasons. First, the independent market monitor (IMM) for
9 MISO has indicated in ongoing MISO State of the Market reports every year that market
10 clearing prices in the MISO energy market have not deviated more than 1 to 2 percent
11 above the IMM's calculated marginal costs or reference prices. Commission staff has
12 reported and relied on these IMM results in the agency's biannual Strategic Energy
13 Assessment (SEA). It is noteworthy that in such a marketplace, by my calculations there
14 are entities in terms of demand like the two-state Ameren (19 gigawatt (GW)), Detroit
15 Edison (12 GW), the multi-state Entergy Combined Companies (20 GW), and multi-state
16 Xcel Energies (10 GW) that will still be larger than the combined company in this
17 proceeding WEC Energy, which will be around 10 GW. If the relevant geographic market
18 place is indeed the MISO footprint and these larger companies are not able to influence
19 market clearing prices according to the IMM, it is difficult to see how the current merger
20 would change the overall result unless the relevant geographic market is not the MISO
21 footprint but some smaller sub-market.

22 Q. Do you believe that some smaller sub-market may exist for the examination of horizontal
23 market power issues?

1 A. Perhaps. On November 24, 2014, FERC staff requested that the applicant submit a delivered
2 price test examining the narrower sub-market in MISO, the Wisconsin Upper Michigan
3 system (WUMS). The applicant filed their response with FERC on December 18, 2014,
4 stating that WUMS is not the relevant market by addressing certain FERC staff questions
5 with new testimony and analysis; but due to the complexity of the effort no delivered price
6 test was presented to FERC. In the December 18th filing at FERC, WEC Energy continues
7 to indicate that the full MISO footprint is the relevant marketplace and geographic footprint.
8 In a worst-case type of analysis and under a complicated arrangement of binding
9 transmission constraints, the applicant did indicate that perhaps 79 MW could influence
10 market prices, but the amount is *de minimis*. My sense is that FERC staff sent out the data
11 request for two reasons. First, due to transmission constraints, the WUMS region could
12 operate in a constrained mode where generation inside WUMS is used more extensively to
13 operate the system. Second, the loss of rivalry between We Energies and WPSC could
14 influence market price outcomes. This is a question of fact that the FERC proceeding will
15 explore, but, as of this writing, the applicant does not believe that WUMS is the relevant
16 marketplace. FERC will of course make its own finding of fact and determination.

17 Q. For sake of argument, even if one accepts the relevant geographic marketplace to be the
18 WUMS region, is there a fundamental reason that the merger could yet be approved by
19 the Commission and FERC?

20 A. Yes. Presently, it is well known that WUMS is defined as a Narrowly Constrained Area
21 (NCA) by FERC and the IMM which reports to FERC. Within an NCA, FERC requires
22 that generator offers be policed by the IMM. That is the case at present, where the IMM
23 does impose offer caps on WUMS generators when transmission constraints are binding,

1 and generators located within WUMS could exercise pricing authority. The existence of
2 the IMM acts as a vigilant highway patrol officer, and under certain circumstances can
3 even reach in and adjust market clearing prices after the fact, should market power have
4 been exploited. With the current merger, the IMM can keep in place the present price
5 policing method, thwarting the exercise of horizontal market power, especially if both
6 companies act separately and there is no conspiratorial communication at high levels of
7 management to have the two operating utilities price collude. Furthermore, if it is
8 determined that within WUMS the new company will have increased pricing power, FERC
9 or the IMM could simply impose even tighter generator offer behavior restrictions. Using
10 the highway patrol officer analogy, the Wisconsin interstate speed limit is 65 miles per
11 hour (mph), and the highway patrol may start writing tickets at 70 mph. After the merger,
12 the IMM and FERC could simply change the instruction to 66 mph for writing speeding
13 tickets or even, if necessary, lower the speed limit to 55 mph as it is in large cities where
14 traffic is heavier and congestion exists. From this analogy, the merger could be approved
15 by FERC and the Commission because a policing mechanism exists and is capable of being
16 adjusted as circumstances warrant. In a worst case scenario, FERC could find a specific
17 power plant or plants that may require divestiture; but with policing in place, the merger
18 could be approved with appropriate generator offer restrictions or limited divestiture for
19 when indeed WUMS is the relevant geographic market.

20 Q. Does your answer above cover both wholesale and retail markets?

21 A. Yes, it does but for different reasons. The discussion above is primarily focused on
22 wholesale markets which “feed” to the utilities the wholesale power prices that then
23 become part of the costs recovered in retail rates. In the retail setting, the Commission

1 regulates retail rates. In that environment the Commission polices pricing power, and
2 with direct retail price control, thwarts by definition the ability to exercise retail market
3 power. This finding is based on the fact that retail choice does not exist in Wisconsin.

4 Q. How does your background with prior mergers affect your analysis in this case?

5 A. In 1996, I testified on the then Primergy merger of WEC and NSP. At that time, wholesale
6 energy markets were nascent; Bloomberg Service was just beginning to report some
7 wholesale energy transactions; FERC Orders 888 and 889 on open access were new; there
8 were no RTOs such as MISO; there was no FERC Order 2000 on RTOs; the Wisconsin
9 utilities were vertically integrated; and the policy climate was one of potential retail
10 deregulation in Wisconsin and many other states. I specifically recall advocacy for such a
11 retail choice change by Alliant, WEC, and WPSC, albeit in different forms. In that
12 environment, Commission staff had to examine the proposed Primergy merger from two
13 angles: wholesale markets and retail markets. Commission staff's Primergy merger
14 analysis, as well as that of other intervenors, was not kind. Moreover, in 2000 the
15 legislature asked the Commission to analyze the potential for retail competition. The hired
16 consultant, Tabors, Caramanis, and Associates of Boston, Massachusetts, indicated retail
17 choice would not work inside Wisconsin unless WEPCO was broken into three generating
18 companies.¹ I was the Commission's project manager on that study. However, as noted
19 above, the world has changed dramatically since then. MISO now operates mature
20 wholesale energy markets which have been in operation for nearly ten years; FERC has

¹ "Report to the Legislature on Horizontal Market Power in Wisconsin Electricity Markets," Public Service Commission of Wisconsin, December 2000, at page 3: "A workably competitive retail electricity market could be achieved by implementing two changes to the current market structure, namely the divestiture of WEPCO generation assets among three independent companies and the requirement that owners of existing generation commit a significant portion of their capacity under fixed price contracts or standard offer service. Under such circumstances, electricity rates would be significantly lower than would prevail if market power were not mitigated."

1 implemented RTO policy via Order 2000 and other orders; FERC has entrusted RTOs and
2 IMMs with policing horizontal market power in light of serious issues that occurred in
3 California in 2000 and 2001; and to my knowledge there is no policy environment in which
4 the applicant in Wisconsin advancing retail electricity deregulation. This changes the way
5 the Commission needs to examine the proposed merger here dramatically. FERC has
6 primacy over wholesale energy markets and is the appropriate place for any strong
7 economic analysis of generator offer behavior. In the case of retail issues over which this
8 Commission has jurisdiction, with no movement towards retail choice, the proposed
9 merger on the retail side needs to be examined from the perspective of potential retail
10 market power. But absent a retail choice direction, the Commission maintains full price
11 regulation of the regulated utilities in a post-transaction WEC Energy Group, Inc.
12 Consequently, the need to examine potential retail market power is absent. The
13 Commission is the price setter using fuel and rate proceedings. I would note that the
14 present merger, in light of the 2000 Tabors, Caramanis, and Associates study, could
15 preclude retail choice from being implemented. Should that become the case, that issue is
16 one for the legislature to wrangle with at that time, not for the Commission at this time in
17 my view unless there is knowledge that WEC and Integrys Energy do want to adopt retail
18 choice. I am unaware of such a movement by those companies. Should retail choice one
19 again revisit the policy-making realm, my professional opinion would be to study it in the
20 rigorous behavioral economics fashion done in 2000. I would finally note that, with full
21 retail price regulation and the absence of retail choice as a policy threat, the Commission
22 will need to deal with important distributed generation issues to make sure this merger does

1 not preclude innovative or technological developments in that area. I am not an expert on
2 this particular aspect to indicate any choices.

3 Q. Please describe vertical market power issues that you believe are important with respect
4 to this merger.

5 A. Vertical market power refers to the situation where an integrated company with
6 transmission and generation assets, or a generator company with ownership in another
7 business with transmission assets giving it an integrated presence, exploits either its
8 generation or transmission to achieve an unfair market advantage. Specifically, a company
9 as described above could either (1) use the generator assets to create pricing power in the
10 transmission market, or (2) operate the transmission system in such a way as to maximize
11 generator profits above competitive norms. In the instant situation, given that ATC is
12 owned by Integrys Energy and WEC, can ATC operate or plan its system to maximize
13 profit potential above competition norms for the WPSC or WEPCO generators? And vice
14 versa, can WEPCO and WPSC run their generation fleet or do generation planning in such
15 a way as to maximize potential revenues at ATC that would flow eventually as dividend
16 payments to the owners of ATC, that is, WEC, Integrys Energy and others? The answers
17 to these questions are more ambiguous and not truly quantifiable. Dealing with horizontal
18 market power issues is relatively easily from an economics viewpoint. Dealing with
19 vertical market power issues leads one strongly into the realm of legal analysis.
20 Nonetheless, a few economic observations are instructive here.

21 Q. What are those economic observations that you think are relevant to the merger in this
22 proceeding?

1 A. Vertical market power concerns the abuse of the relationship between owned generation
2 and transmission assets for the particular company's gain at the expense of the market
3 place. However, this should not be confused with certain economic advantages that can
4 occur with a company that is vertically integrated. In the MISO footprint there are
5 numerous vertically-integrated utility companies (VITO). These VITOs exist not
6 necessarily to exploit the marketplace, but to take advantage of what are called economies
7 of scale and scope in the industry. By owning both generation and transmission, a
8 company can potentially be a lower-cost electricity provider by taking advantage of the
9 synergies available in the relationship of owning and planning both generation and
10 transmission assets. Those benefits can be passed on to consumers. In many traditional
11 regulated retail states, many utilities still operate as VITOs. An example may help explain
12 the nature of the economies of scale and scope that can exist to the benefit of customers as
13 long as vertical market power abuse is not in play. For instance, consider the following
14 reliability situation. To fix a particular reliability issue may take either \$400 million in
15 generation assets or \$700 million in transmission assets. In this hypothetical, the
16 generation option looks to be the least cost choice. However, a joint use of generation
17 assets and transmission infrastructure within a robust planning regime may require only
18 \$175 million in strategically-placed generation accompanied perhaps by a lower-cost
19 transmission build out of, say, \$175 million, for a total of \$350 million. In this simplistic
20 example, the combination of transmission and generation assets via optimal planning of
21 both generation and transmission inside a VITO creates the lower cost option for
22 consumers. This is what I mean by the benefits of economies of scale and scope in the
23 electricity business that can arise under vertical integration. When both aspects are price

1 regulated, the scale and scope benefit accrues to consumers. If market power abuse occurs
2 in a market-set rates example by a company concerned only with the exercise of its pricing
3 power and absent horizontal or vertical market power policing, such a company could
4 charge the marketplace somewhere around \$400 million or more depending on
5 transmission constraints. Such an outcome would not benefit electricity consumers. So the
6 key here is that a vertical relationship must be properly disciplined by either vigorous
7 market forces, behavioral conduct mitigation threats via vigorous IMM policing, or the
8 outright price regulation by a commission. In that fashion consumers can benefit.

9 Q. How does this example apply to the merger at hand?

10 A. Both WEPCO and WPSC are generation asset owners. Both WEC and Integrys Energy
11 are co-owners of ATC, as well as owners of WEPCO and WPSC. Upon consummation
12 of the merger, WEC Energy will own 60 percent of ATC assets and management. This
13 might or might not be a benign situation. In the situation where the economies of scale
14 and scope are well disciplined by market forces, a vigorous market monitor, or outright
15 price regulation, the relationship could benefit consumers. Presently, MISO and the
16 IMM under relevant FERC orders police both horizontal and vertical market power
17 issues. Thus, to some extent the potential to abuse vertical market power is limited, but it
18 is not likely to be perfect. With the amount of money at stake here, and the ability to
19 influence both MISO and FERC via stakeholder and legal processes, there will always be
20 doubts about whether WEC Energy and ATC truly are functionally and operationally
21 proceeding in a direction to achieve vertical integration benefits and not to potentially
22 abuse the relationship for financial gain at the expense of the marketplace consumers.
23 For that reason, I believe it is important to examine the institutional history of the setup

1 of ATC by the legislature, and why that presents the Commission an option worth
2 considering in this proceeding.

3 Q. What is the institutional history from the late 1990s that is still relevant today?

4 A. In 1999 Wisconsin Act 9, the Wisconsin legislature passed significant legislation related
5 to the electric industry restructuring forces in play at the time. Included in Act 9 were
6 provisions allowing the formation of a separate transmission company in Wisconsin
7 under certain circumstances. Those circumstances have occurred. As a result, today
8 Wisconsin has ATC, a company that owns, plans, and operates transmission in most of
9 Wisconsin and the Upper Peninsula. Complete ownership of ATC rests with Wisconsin
10 utilities. While the legislation does not use the words of the economics literature, in
11 hindsight, the ATC-enabling legislation represented good forward policy as the electric
12 industry continues to evolve using more competition. The legislation contained a key
13 unique balance between the potential for the abuse of vertical market power, and the
14 potential for the gains from economic scale and scope gains based on vertical integration.
15 The ATC-enabling legislation required RTO membership as a way to contain vertical
16 market power abuse: the ownership set up was such that no single entity was a majority
17 owner of ATC capable of “reaching in” and exercising any vertical market power abuse
18 through means that simple RTO membership and RTO oversight might not prevent.²
19 That is highly relevant today, and the Commission could consider that situation important

² This statement is premised on the fact that at the time the Commission and utilities were proceeding ahead with the \$200 million (eventually \$400 million) Arrowhead-Weston 345 kV transmission project in which the assets would be contributed to ATC by WPSC. With that factored in, no company had a majority ownership. It is factual that in docket 137-NC-100 the Commission did approve the formation of ATC on December 22, 2000, in which at that particular point in time WEC would own 51 percent of ATC; but, again the environment was one of WPSC eventually contributing its significant Arrowhead-Weston assets to ATC control and operation, an event that did occur. With this understanding, ATC has technically had for a period of time a majority owner, but the expectation was clearly that with the WPSC Arrowhead-Weston project folded in, a majority situation would not sustain, and it has not.

1 today. Since the ATC-enabling legislation was constructed where no one entity would be
2 expected to be a permanent majority owner of ATC, the same fundamental policy
3 judgment might be given consideration going forward as well. Specifically, the new
4 company will own about 60 percent of ATC and become a majority owner. While the
5 new company has indicated that under many circumstances it will not exercise such
6 majority control by only voting in such a way to show only 34 percent ATC ownership,
7 in matters of large pecuniary or strategic value, the new company will still vote its full
8 60 percent ownership interest in ATC. This is a departure from the environment that
9 allowed the creation of ATC.

10 The Commission here might want to consider maintaining a situation where no
11 company has majority control. In her direct testimony, Commission staff witness Lois
12 Hubert proposes capping WEC's voting percentage at 34.07 percent for all corporate
13 matters, including the strategic questions identified by WEC in its application. That
14 proposal would reasonably continue the current balance of ownership interests that has
15 facilitated needed transmission expansion in this state while at the same time preventing
16 any one utility's domination of transmission development for its self-interest. Another
17 option the Commission might consider is barring the new company from having a
18 majority ownership situation under any circumstances, and put in place the appropriate
19 conditions where the new company (or any company, should a public offering eventually
20 occur) would not be a majority owner, but perhaps a super-minority owner. To do so
21 would require the new company WEC Energy Group to jettison some fraction of its ATC
22 ownership to bring it down to a value somewhere around 40 percent ownership for all

1 voting purposes.³ Doing so would continue on a forward basis the balance, the
2 relationship, and the expectation the Wisconsin legislature enabled back in the late 1990s
3 when it faced this crucial policy choice and had significant debate. It would also
4 eliminate the awkwardness of the 34 or 60 percent voting rules the new company
5 suggests be put in place, and would act as insurance that vertical market power abuse not
6 occur in the future in ways that are not readily foreseeable.

7 Finally, having the applicant (WEC) own 60 percent of ATC essentially amounts
8 to the recreation of a vertically-integrated company with a complicated, likely redundant
9 management structure that begs the question of whether a new VITO should just be
10 created. Such a new VITO could save Wisconsin ratepayers an estimated \$24 million in
11 transmission revenue requirement annually. See Ex.-PSC-Pilo-1. While that concept
12 may be appealing, I believe the essence of Act 9 was to move away from the historical
13 VITO model. To facilitate that movement in a manner more consistent with Act 9,
14 Commission may wish to consider some mechanisms to limit control of ATC, including
15 divestiture, as a condition of approval of the acquisition.

16 Q. How might the Commission consider the option of requiring the new company to only
17 own around 40 percent of ATC?

18 A. Requiring the new company to essentially divest some share of its ownership in ATC
19 would be a difficult undertaking, requiring legal analysis, the redoing of numerous
20 contracts and agreements, and having an investment banking analysis of the appropriate
21 way to conduct such a divestiture. There would also be significant policy choices the

³ This percent figure is suggested to prevent a small coalition of minority owners uniting with a near majority owner (*e.g.*, near or at 49 percent ownership). Such a coalition could impose its will on ATC in a very self-interested manner and bypass engaging in the substantial give and take to reach a decision that is now needed to develop a majority consensus across a diverse ATC ownership base.

1 Commission would need to consider as to who should own the divested shares, and how
2 to distribute any gain over book or rate base value any such sale or divestiture might
3 create. There are other issues that could need exploration as well, but the above
4 enumeration is a start. For that reason, if the Commission wants to consider the option of
5 requiring the new company to only have a super-minority ownership interest, the
6 Commission may want to conditionally approve the merger with the presently proffered
7 voting restrictions by the applicant, but require the new company to bring forth within a
8 year a full-fledged independent legal, investment banking, and policy divestiture analysis
9 for the Commission to consider. While the merged companies would pay the bill for
10 such a rigorous analysis, to have maximum impartiality, the companies would submit
11 several choices for vendors, but have the Commission pick the ultimate analysts.

12 Q. Are there other ways in which the merged company could have less than majority control
13 of ATC?

14 A. Yes. The Commission could require WEC Energy to not participate in capital calls or it
15 could restrict voting rights for all purposes to the 34 percent value of Integrys Energy's
16 present position. There may be other options as well. Lois Hubert of Commission staff
17 will be discussing such methods, should the Commission want to consider this issue
18 further.

19 Q. Does this conclude your direct testimony?

20 A. Yes.

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